

5599/USSN 10/018,049
Group Art Unit 2871

AMENDMENT TO THE CLAIMS

Claims 1-9 (Canceled).

10. (New) A process for manufacturing an optical compensation polymer layer for a LC optical light shutter having an optical axis perpendicular to a surface thereof, said process comprising

(1) pouring a monomer or prepolymer mass as a layer either (a) over a rigid substrate surface, (b) between two rigid substrate surfaces separated by soft spacers, or (c) between two rigid substrate surfaces separated by hard spacers;

(2) polymerizing said layer such that with (a) or (b) said layer is fully cured and mechanical strains result from shrinkage during polymerization which are in a direction perpendicular to the substrate surface(s), said mechanical strains resulting being smaller than mechanical strains present within a plane of the layer, or polymerizing said layer such that with (c) the monomer or prepolymer mass polymerizes to a first level at which viscosity of the mass is increased to a point that the mass does not leak out from between the substrate surfaces, followed by removal of the hard spacers and completion of polymerization so that the

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layer can unrestrainably shrink in a direction perpendicular to the substrate surfaces; and

(3) cooling said layer to room temperature.

11. (New) Process according to claim 10, wherein said polymerizing is thermally activated at a temperature lower than glass phase transition temperature of the polymer, and resulting optical birefringence can be optically reduced by reheating the layer polymerized to a temperature approximate the glass phase transition temperature of the polymer.

12. (New) Process according to claim 10, wherein said polymerizing is activated at least initially by UV light.

13. (New) Process according to claim 10, wherein said polymerizing is at an elevated temperature which is lower than a glass phase transition temperature of the polymer of the layer.

14. (New) Process according to claim 10, wherein activation of said polymerizing is by UV light and pouring of said monomer or prepolymer mass is in accordance with (c), said activation by UV light is in two stages, to said first level allowing removal of the hard spacers, and secondly to completion substantially in the absence of mechanical strains in a direction perpendicular to the layer polymerized.

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15. (New) A LC optical light shutter comprising an optical compensation layer manufactured according to said process of claim 10, 11, 12, 13 or 14.

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